

# Global Fastener Machinery Suppliers

## 全球紧固件机械大厂，揭开中国紧固件内需面纱

### Unveiling Domestic Fastener Demand of China

by Tanya Shih, Fastener World Inc. 企划 / 惠达 施淳真

The total fastener production of China in 2013 reached 6.8 million tons, up 3.3% over the corresponding period, and 2.558 million tons of steel products were for export, which means roughly 4.25 million tons were for the domestic demand of China.

In the most recent years, voices like "We should learn from the development of Japan" and "we are really impressed by the manufacturing techniques of Korea" are usually heard in Chinese fastener industry. Such voices can be attributed to the lower price level of China's fastener export, though the total amount of fastener export takes the lead. Chairman Fengjing Yao of China General Machine Components Industry Association (Fastener Sub Association) optimistically expected in the Five Regions Fastener Association Conference that the total fastener production of China would climb to 7 million tons by 2014.

Definitely, the achievement of such target has to rely on the progress of Chinese fastener industry toward high quality level with more focused, distinguished, and specialized steps. How should the fastener manufacturing level be on top? Global fastener machinery suppliers have seen the demand and grasped the business opportunities, so that is why Fastener World Magazine invited several excellent fastener machinery suppliers from China, Taiwan, Europe, and USA to join in this feature coverage.

2013年中国大陆紧固件总产量来到680万吨，同比增长3.3%，其中出口量为255.8万吨(钢制品)，这也表示中国本身拥有约莫425万吨的内需实力。

近几年在中国紧固件产业时常听到「借鉴日本发展模式、赞叹韩国制造工艺」这样的声音，这肇因于中国作为紧固件出口量大国，而出口额部分尚缺霸气。中国机械通用零部件工业协会紧固件分会冯金尧会长在今年的五地区螺丝协会交流会上乐观预期中国紧固件产量在2014年可望力争700万吨。

当然，这样的目标必须仰赖中国紧固件企业走出高质量路线，确实踏出专、特、精的稳健步伐。紧固件技术生产能量何以能拔尖？全球紧固件机械大厂看到了需求也抓紧了商机，惠达杂志此次特别邀请来自中国大陆、台湾以及欧美等数家优异紧固件设备大厂参与在列。

#### Taiwan

### San Yung Electric Heat Machine Co., Ltd. 三永电热机械股份有限公司

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San-Yung was established in 1970. It has technical cooperation with Japanese and American consultants to further integrate the technical features from eastern & western world. Today San-Yung has been the biggest professional heat-treatment furnace manufacturer in Taiwan, and one of the biggest professional manufacturers for mesh belt type continuous carburizing (hardening) quenching furnaces in the world.

San-Yung furnaces are used for fasteners, hand tools, bicycle parts, chains, forging parts, automobile parts, motorcycle parts, etc. San-Yung mesh belt type continuous quenching furnace occupies over 90% of Taiwanese market and many famous companies in the world chose San-Yung furnaces.

So far, San Yung's brand is recommended by all of our customers, and currently our sales network has reached all over the world, including U.K., Germany, Romania, Norway, U.S.A., Poland, Italy, Brazil, Argentina, Russia, Belorussia, Ukraine, Kazakhstan, Turkey, Korea, Japan, India, Thailand, Indonesia, Malaysia, Singapore, Vietnam, Dubai, Bangladesh, Egypt, Pakistan, Iran, Mainland China, etc. The excellent sales performance should be the best guarantee for San-Yung quality. We still progressively develop our technology for No.1 quality product, and we wish to march into a prosperous future together with all of our clients.

三永自1970年成立以来，致力于新产品新技术的研究



开发，并与日本、美国进行技术合作，以提高热处理品质及降低客户的生产成本。除热处理设备外，还提供客户热处理操作人员培训，以及技术谘询。三永公司被公认为台湾规模最大及最专业的热处理设备制造厂；并已列为全世界最具规模与最佳销售实绩的连续式光辉渗碳(调质)淬火炉的专业制造厂。产品偏布于台湾螺丝、手工具、脚踏车零件、汽机车零件，金属锻造及热处理加工等各大业界，市场占有率高达90%。至今产品已遍布全球，包含欧、美、日本等先进国家。

## Tainan Chin Chang Electrical Co., Ltd. 台南振昌电机有限公司

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The company has operated for more than 40 years. It upholds stability and a steady management style to face the challenges of the 21st century. Under the rapidly changing business environment, the company is also committed to technology research to bear the advent of high-tech industries and challenges.

Now the company, in the furnace sector, has established itself in the leading position in Taiwanese market, after long intensive research and development, etc. Now it serves clients from China, Japan, Thailand, Vietnam, Indonesia, Malaysia and other Southeast Asian countries as well as moves towards the future development of new technologies, new products and provides better service and quality to customers with the goal.

### Main products:

- Annealing furnaces (Bell-shaped type, BP type, Pit type)
- Continuous roller or batch annealing furnaces
- Stainless wire linear type solution annealing furnaces
- Aluminum alloy heat treatment furnaces (T4,T6)
- Copper alloy vacuum annealing furnaces
- Continuous type high temperature sintering furnaces and brazing furnaces
- Pit type heat treatment furnaces
- AX,DX,NX,RX atmosphere gas generating furnaces

本公司设立40余年,秉持稳定踏实的经营风格,在世纪洪流中,产业界经营环境急速变化中,更致力于技术的研究,及对设备制造过程落实品质要求,以面对高技术产业的来临及挑战。客户群遍及大陆、日本、泰国、越南、印尼、马来西亚等东南亚的国家。未来更朝着开发新技术,新产品以提供给客户更好的服务与品质等目标迈进。

### 主要产品:

- 退火炉(钟罩式、BP式、坑式)
- 辊轮连续式或批次式球化退火炉
- 不锈钢线直线式固溶化退火炉
- 铝合金用热处理炉(T4,T6)
- 铜合金真空退火炉
- 连续式高温烧结炉及铜焊炉
- 坑式渗碳淬火炉
- AX、DX、NX、RX气体变成炉



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Sheng Chyeen has been providing maintenance service to local wire drawing mills for 20 years. Responding to our customers' requests, Sheng Chyeen has begun to modify and upgrade customers' existing machines. We have extended our service by building new combined drawing machines, which are more suitable to fulfill the requirements of our customers' mills. With 20 years experience in maintaining and designing bar drawing machines, Sheng Chyeen has expanded its market from Taiwan to include Germany, USA, Japan, China, Korea, and most of Southeast Asian countries.

Sheng Chyeen's machines are the choice of many clients worldwide because of their value, ease of use, easy maintenance, and very fast delivery. The key to achieving this organization is the young and energetic engineering team in Sheng Chyeen. The team adopts the latest technology to increase the performance, reliability, cost and control of the machinery. Our engineers welcome the customer's input and requirements during the design and planning stage, thus creating the most suitable equipment for their individual needs. Sheng Chyeen's production and products are ISO 9001 and CE certified.



省权投入研发有色金属及非有色金属棒材生产设备,省权设备具下列优势:

采模组化设计,使用电脑设计及分析软体进行零件开发,拥有国内外多数专利。使用知名大厂工具机生产零件,自制关键零件,品质严控且设备组立遵照SOP,生产者经长期专业训练。从零件生产、设备组立至销货,过程皆严格控管。取得CE、ISO认证;提供一次购足服务,节省成本;交期/服务快速;高度客制化。省权在棒材生产设备领域异军突起,获得肯定且每位客户多次再向省权购买,获得各国大厂的青睐,销售足迹遍及世界。

## Jenn Tai Machinery Enterprise Co., Ltd. 振太机械企业股份有限公司

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Chen Tai (Jenn Tai) Machinery is a Taiwan-based factory and has specialized in Vibratory Bowl Feeder for 30 years. With the best quality and R&D team, our brand "CHEN TAI" is known as an expert in Feeding System around the world. "CHEN TAI" vibratory bowl feeders are sold to major players of thread rolling machines, precise optical inspection machines, assembly machines, screw point cutting machines, etc. in Taiwan. Our bowl feeders can automatically orientate screws, washers, studs, bolts, nuts, washers, rivets, special fasteners, etc... on the same direction for feeding out one by one with a satisfying speed. We not only produce vibratory bowl feeders, but also invent many machines for Feeding System. You are very welcome to feel free to contact us at any time.

我为台湾专业振动送料机械制造有限公司已有30年之经验,为提供更周全服务,于2003年创立"上海振好机械有限公司",生产无数客制化送料机,跨足螺丝业、手工具业、电子业、食品业、包装业...等任何需要输送排列之制程。我司除了生产振动送料机外,也不断研发更多自动化机器以符合客户之需求,例:直线送料机、补料桶、全自动金属刻字滚花机、升降式自动上料机、长管、长套筒两端自动选向机、数控斜盘螺丝华司组合机及矫直机...等。



## China

**Jern Yao Machinery (Shanghai) Co., Ltd. 正侑机械(上海)有限公司**

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Jern Yao Machinery supplies a wide range of machines for fasteners in any size and specification. It has developed over 100 kinds of screw, nut, and multi-functional part forming machines, the best record compared to other competitors worldwide. Every year it produces over 180 machines. The existing customers of Jern Yao include not only standard fastener plants, but also those manufacturing non-standard products and forged parts. With its headquarters in Taiwan, Jern Yao's main markets cover 35 European, American, and developing Asian countries (with over 100 companies). With the spirit of combining service and marketing together, Jern Yao's sales possess practical experience and can help customers solve technical problems at any time, as well as offer forming technique consulting and information for mechanical operation, bringing the largest benefit to customers choosing our products.

正侑公司所生产之产品机种齐全, 涵盖各类标准件之范围。目前本公司已开发之各类螺丝、螺帽及多功能特殊零件成型机机种已达百余种, 居全世界同业之冠, 且每年总生产数量能多达一百八十余台。正侑现今的客户群以过去的标准扣件业, 扩大至非标扣件及其他锻造行业, 台湾总公司外销主力市场涵盖欧洲、美洲等先进国家及开发中的亚洲各国, 共35国, 约有百余家厂商。正侑公司本着服务与行销合一的理念, 公司的业务及售后服务人员都具有丰富实务经验, 可随时协助客户解决技术上的问题, 并随时提供成型技术谘询与机械操作资料, 俾使本公司产品均能即时为客户带来广大的利润。

**Zhongshan JiuWen Machinery Co., Ltd. 中山市久稳机械有限公司**

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Zhongshan JiuWen Machinery was founded in October 2003, formerly named East Jiangxi Machinery. In January 1st 2013, it officially changed its name to JiuWen Machinery. Since the establishment, the company has kept introducing Taiwanese, Italian and other domestic and foreign advanced technology. After ten years of exploration, innovation, pursuit, and growth, it has established an independent and complete R&D system and material supply system, and has gained suppliers with high quality and stable manufacturing and mold developing abilities. It has now become one of the professional fastener equipment manufacturers in China that can innovate, produce, and sell on its own. At present, major products of the company are M6-M20 two die four blow, three die six blow, large-scale one die two blow, and other types of one die two blow screw & rivet and customized cold heading equipment.

After years of development, the company has a team with abundant R&D, manufacturing, and testing experience that can help new and existing customers grow with the company.

中山市久稳机械有限公司, 创立于2003年10月, 前身为江西赣东机械。2013年1月正式更名为久稳机械。创建以来, 本公司在引进台湾、义大利等国内外先进技术的基础上, 经十年来的不断探索、追求、创新、成长, 已建立起自主完整的技术研发体系、物料供应体系, 及高素质、长期稳定的配套生产及模具开发制造供应商。现已成为中国大陆独具特色的集自主研发、生产制造, 销售于一体的紧固件设备专业生产厂商。目前本公司主要生产有M6~M20二模四冲、三模六冲、大型一模二冲、及圆剪式一模二冲螺丝、铆钉冷锻设备、特殊订制冷锻机。

本公司经过多年的不断发展, 现拥有一支与企业共同成长, 有着丰富的研发、制造、生产、调试经验的团队。竭力与新老客户共同携手前进。

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Qunfeng Machinery Group-Wuxi Zhengyao machinery Co., Ltd specializes in fastener cold forging machines for nearly 20 years, supplywing: 11B~41B6S/6SL/7SL(P.K.O), 50B/58B5S/6SLA, Z51-20/24/27, Z12-M12\*50~M36\*450, etc.

We use FCD50 in our machines. We manufacture machines with Dooshan CNC machining center. Our machines can achieve stable-quality, lower price, and multiple choice. Last year, we provided over 400 sets of machines to our customers. You are welcome to visit our factory.

群丰机械集团下属企业无锡市正耀机械有限公司, 主要为客户提供紧固件成型设备, 包括多工位元冷锻机、零件成型机、大型冷锻机、经济型螺帽机, 大规格打头机等。机型包括: 11B~41B6S/6SL/7SL(P.K.O), 50B/58B5S/6SLA, Z51-20/24/27, Z12-M12\*50~M36\*450等。

公司采用FCD50铸造机体和滑块, 采用韩国斗山数控加工中心加工机械零部件, 年产400多台设备。竭诚为客户提供多种选择, 品质稳定, 性价比高的冷锻设备, 欢迎前来考察。地址: 中国江苏省宜兴市经济开发区惠兴北路。





## Europe &amp; America

## ESCOFIER

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Since its creation, ESCOFIER is a company entirely devoted to cold rolling technology, a field in which they have developed a unique worldwide expertise. They provide complete turnkey solutions from one single source:

1. Design and construction of rolling machines
2. Design and manufacturing of rolling tools
3. Rolling process design

As a result of its modular design, ESCOFIER rolling machines provide many application solutions for all types of cold rolling processes with dies. The 3 sizes of the machine base accommodate a wide range of workpieces. The maximum rolling force of the cylinder (from 5 to 120t), the type of process (electrical or hydraulic), the spindle size, the different motor solutions of motorizations...etc. ensure flexibility to produce all types of profiles : threads, splines, gear finishing, finned tubes, etc.



ESCOFIER自创立之初便投入冷轧科技,并在该领域中发展出全球独有的专业,且提供完整的一站式服务方案:

1. 设计与制造滚轧机械
2. 设计与制造滚轧工具
3. 滚轧流程设计

借由本公司的模块化设计,ESCOFIER滚轧机可提供许多应用方案,适用所有类型中会用到模具的冷轧程序。该机共有三种尺寸,可涵盖种类广泛的工件。圆柱体的最大滚轧力(5-120t)、滚轧类型(电动或液压)、心轴的尺寸、多种动力化方案的马达等等,都可确保各种产制种类的弹性,包括螺纹、花键、齿轮精加工、翅片管等等。

## General Inspection, LLC

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General Inspection LLC manufactures a complete line of Instruments of Lean™. Gauging, sorting, and inspection systems incorporating: Laser, eddy current, and vision technologies for dimensional measurement, determining metallurgical defects as a method for practicing lean manufacturing. Gauging, inspection and sorting systems assure quality in product size, shape and structure. In today's lean manufacturing environment, the quality of your inspection technology is a critical factor in your ability to compete.

In 1991 GI started manufacturing 100% sorting machines designed for fastener and screw machine part manufacturers. In 2003 General Inspection performed a complete overhaul of their machines and introduced 6 new systems. Research and development remains key to GI's success.

All new developments are state of the art and continue to revolutionize inspection technology. Please take some time to browse our website for information on current products and to get a feel for us and our customer's experiences!

Our machines have over 40 Patents or Patents Pending, many of them with multi-country protection; the most patents amongst our competitors, combined. The GI-360 T is a 3-D 100% inspection machine. Precision split/narrow laser beams, multi laser velocity gauge and system 22 modeling of threads are used to accurately measure parts to print specs and tolerances. It uses 3-D information from multiple laser beams to detect defects that may only be on one side of the part such as damaged threads.

General Inspection also provides the newly designed GI-100DT flat part inspection system (nuts, washers, bushings, rings, etc.). It's a high-speed vision based measuring machine that uses a series of front and back lit cameras to calculate a part's height, profile and inner/outer diameters. Multiple patented/patent pending sensors can be added based on the application.

General Inspection 生产一系列完整的Lean™仪器、以及量测、筛选、检测机械,整合雷射、涡流、影像检测科技来测量尺寸并判定冶金缺陷,以此方式来精简制造流程。我们的量测、检测与筛选设备,确保产品在尺寸、形状与结构上的品质。在现今的精简化产制环境下,您拥有的检测科技品质是您竞争能力的关键。



本公司自1191年起,生产专为扣件与螺丝机械用零件制造商设计的100%筛选机械。在2003年,我们为他们的机械进行彻底的翻修,并推出六套新产品。研发能力一直是我们的成功关键。我们所有的研发皆属尖端科技,此外也持续革新检测技术。详情可浏览本公司网页了解我们与顾客的使用体验。

我们的机械拥有超过40项专利(包括申请中的专利),其中有许多机械拥有多国保护机制。我们是同业中拥有最多专利数目的机械商。GI-360 T机型为3D检测机械,搭载的分裂波束/窄幅激光、多重激光测速仪以及螺纹塑型系统用于精准测量零配件以印出尺寸与公差量。该机读取多重激光的3D资讯来侦测常只会在受损螺纹物件的单侧上出现的缺陷。

我们也提供新设计的GI-100DT的平零件检测机(用于检测螺帽、垫片、轴衬、金属环等等)。该机是高速影像测量机,采用前照与后照式摄影机来计算零件的高度、轮廓以及大小径。可根据不同应用环境追加多重感应器(有的已申请或正在申请专利)。

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SKAKO VIBRATION develops, produces and sells vibratory feeders and conveyors to activate, transport and separate all kind of bulk solids. The SKAKO VIBRATION – storage feeder type FV is used particularly for continuous and weight-specific charging of materials for:

Hardening and annealing furnaces, Preparation machines, Packaging machines, Electro-Plating machines, Melting furnaces, Machines for quality control, Separating plants, Washing machines.

SKAKO VIBRATION – furnace feeding systems are a very important part of many industrial processes e.g. for the automatic and weight guaranteed:

- feeding of belt-, annealing - and tempering furnaces
- discharge of industrial washing and drying machines
- feeding and discharge of industrial electroplating- and surface treatment lines Controlled, automatic and weight guaranteed feeding of bulk material ensures a steady product quality, optimized efficiency of the downstream equipment to be fed as well as reproduceable and traceable production parameters.“

With the permanent plc-operator control ( if self-adjustment is required ) with constant target/actual – capacity-comparison and automatic supervision of the feeding cruise of FVE-feeder and the CCE-vibration trough ( if self-adjustment is required), a full automatically, absolutely consistent and equable furnace feeding of all kind of bulk material will be guaranteed.

To complete the programme there is the SKAKO VIBRATION –Lift- and Tipping-system TILDE to empty all sizes of transport boxes into the feeders.

位于德国，专门研发并制造震动给料机，以及用于传输与分流的输送机。主力产品FV型存储给料机专用于连续与特定重量的物料集送，供给该物料给：



硬化炉与退火炉、前置作业机械、包装机械、电镀机械、融化炉、品管机械、分离设备、洗涤机械

火炉给料专用机械是许多制造流程中非常重要的一环，如此才能保证产线的自动化与给料重量的一致：

- 为带式炉、退火炉、回火炉给料
- 为工业用洗涤与干燥机械卸料
- 为工业用电度与表面处理产线给料与卸料

给料的自动管控与给料重量的一致可确保一致的产品品质，被给料的下游设备运作效率也可最佳化，且生产的数据纪录也可复制或追踪。借由机械的程式控制(有时需自行设定调整)、目标/实际产量比较机能、以及自动监控(有时需自行设定调整)FVE给料机与CCE震动给料斗的给料状况，可确保全自动且等量一致的火炉给料效果。本公司另一项产品为升降倾倒设备，可将输送容器中的物料倒入给料机。

## Videx Machine Engineering

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Videx Machine Engineering is a private company, established in 1973 by David Wiesenfeld. The company is designing and manufacturing machinery for the Wire & Fastener industries since 1973. The high performance, accuracy and low maintenance costs of Videx machines attract customers from all over of the world, and Videx has gradually made its name as a world leader in thread rolling machines, Straighten and cut machines and special product machines from wire coils. Today, with 45 employees, Videx exports 95% of the machinery to leading manufacturers in the USA, Europe, Brazil, Japan, Australia, Asia and South America. Videx R&D department employs 9 engineers who are constantly investing in development of new processes and technology. A special emphasis is put towards reducing the change-over time, as well as improving the reliability and durability of the machines.

### Product info

Videx machinery:

- Planetary thread rollers for headed and headless screws.
- Double-spindle thread rollers for wheel bolts, motor studs, etc.
- Straightening and cut-off machines for drawn wire and hot-rolled wire with and without chamfer up to  $\varnothing 25\text{mm}$ .
- Solid-die, 2-blow hot formers for hex bolts up to 4”
- Fully automatic machines for u-bolts & eye bolts.
- Extrusion machines for cold-drawn and hot-rolled bars up to  $\varnothing 80\text{mm}$ .
- Long stroke open die rod headers, working from magazine or wire coil.
- Thread rolling dies for planetary (rotary) machines.
- Bundling machines for threaded rods.
- Impact cutters with quick-change bar feeders.
- Mine-roof bolt machines.



我们是1973年由David Wiesenfeld创立的私人公司，总公司位在以色列，专为线材与扣件产业设计并生产高效能、精准且低维修成本的机械，广受全球客户注目。本公司品牌已逐渐成为滚丝机械、拉直机械、切削机械、特殊机械的世界领导者。目前旗下有45名员工，有95%的机械产品外销给欧美、巴西、日本、澳洲、亚洲、南非的龙头制造商。我们的研发部门雇用9名工程师，研发新制程科技，特别注重减少换机时间以及提升机械的可靠度与耐用度。

- 有头与无头螺丝专用的周转式滚丝机
- 车轮螺栓与马达柱栓等等专用的双心轴滚丝机
- 拉伸与热轧线材(含倒角与非倒角，最高到 $\varnothing 25\text{mm}$ )专用拉直与切削机械
- 六角螺栓(最高到4”)专用的整模2冲热成型机
- U型螺栓与吊环螺栓专用的全自动机械
- 冷拉伸与热轧棒材(最高到 $\varnothing 80\text{mm}$ )专用的压出机械
- 长冲程敞开放式锻模的棒材打头机
- 周转式机械专用的滚丝模具
- 螺纹棒材专用的捆包机
- 搭载可快速切换的棒式给料器的冲击式切削机
- 螺栓机械